

Replaced by Article 34  
09 Feb 05

10/52398

## CLAIMS

- 1) Cardboard tubes producing machine, comprising means for feeding more paper or paper-like strips or ribbon-shaped material, a part of which is glued in correspondence of the lower surface thereof, for advancing and winding the said strips or ribbon-shaped material forming overlapping and staggered spirals onto a spindle (1), and cutting means for cutting the tube obtained by the advancement and winding of the strips or ribbon-shaped material on the spindle (1), thus obtaining tubular elements having a predetermined length, characterized in that it comprises means (3), positioned upstream of the spindle (1) with respect to the advancing direction of the strips or ribbon-shaped material towards the spindle (1), distributing a predetermined amount of quick setting glue between the surfaces of the penultimate and the last strips or ribbon-shaped material wound on the spindle (1).
- 2) Machine according to claim (1) characterized in that it comprises means (4) for sensing the advancing speed of said strips or ribbon-shaped material wound on the spindle (1), the said quick setting glue distributing means (3) being driven by the said sensing means (4).
- 3) Machine according to one or more of the preceding claims characterized in that the said quick setting glue distributing means (3) comprise a "hot melt" glue distributor.
- 4) Machine according to one or more of the preceding claims characterized in that said quick setting glue distributing means (3) comprise a nozzle (31) oriented towards the upper surface of the penultimate strip or ribbon-shaped material.

- 5) Machine according to one or more of the preceding claims characterized in that said quick setting glue distributing means (3) comprise a nozzle (31) oriented towards the lower surface of the last strip or ribbon-shaped material.
- 5 6) Method for producing cardboard tubes by winding a plurality of strips or ribbon-shaped material onto a spindle, a part of said strips or ribbon-shaped material being glued in correspondence of the lower surface thereof, forming corresponding overlapped and staggered spirals, characterized in that provision is made for applying a predetermined amount of quick setting glue between the surfaces of the penultimate and the last strips or ribbon-shaped materials wound on the spindle.
- 10 7) Method according to claim 6 characterized in that said quick setting glue is distributed only when the advancing and winding speed of said strips or ribbon-shaped material is higher than a predetermined value.
- 15 8) Method according to claim 6 characterized in that the quick setting glue is a "hot melt" glue.
- 20 9) Method according to claim 6 characterized in that the quick setting glue is distributed on the upper surface of the penultimate strip or ribbon-shaped material.
- 25 10) Method according to claim 6 characterized in that the quick setting glue is distributed on the lower surface of the last strip or ribbon-shaped material.